CSCE 2615 Enterprise Systems Architecture, Analysis and Design

Instructor: David Keathly
Office: NTDP F201J
Office Hours: MW 1:00 pm – 2:00 pm
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Semester: Spring 2011
Time: T/Th 3:30 – 4:50
Place: NTDP B158

Course Catalog Description

Overview of software architectures for information systems starting with requirements and proceeding through the analysis and design aspects of the software development lifecycle. Introduction to a variety of implementation methodologies as well as alternate architectural paradigms. Laboratory and project activities expose students to the design and specification of IT Systems to meet a variety of business and technical problem environments.

Course Outcomes

1. Demonstrate an understanding of the multiple layers of abstraction in modern computer systems and the interface between software and hardware.
2. Evaluate the hardware requirements for an IT System and select the proper architecture and components necessary to satisfy the requirements.
3. Evaluate the software requirements for an IT System, and define software architecture to satisfy the requirements.
4. Demonstrate an understanding of the use of UML and analysis and design patterns in the development of a system design.
5. Demonstrate an understanding of design and development methodologies and architectural paradigms through laboratory assignments and a class project.
6. Demonstrate communication skills that will enable clear reasoning and logical descriptions of problems and solutions in the design, implementation and management of large-scale IT Systems.

Textbook:


Prerequisites

CSCE 1040

Course Requirements:
Attendance: Optional, although student is responsible for all materials covered in lecture and class discussion
Exams: 2
Assignments: There will be a few initial individual assignments and a number of group deliverables during the semester

For More information

David Keathly's Webpage: www.cse.unt.edu/~dkeathly
Class Web Page: moodle.cse.unt.edu

Topics

This course provides an introduction to Systems Analysis and Design. Topics include analyzing the business case, requirements modeling, data and process modeling, and development strategies, with an increased focus on object modeling and project management. Students also learn about output and user interface design, data design, systems architecture and implementation, and systems operation, support and security.

Course Calendar (subject to change)

<table>
<thead>
<tr>
<th>Week</th>
<th>Topics</th>
<th>Readings, Materials and Assignments</th>
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<tbody>
<tr>
<td>Week 1</td>
<td>Course Overview Intro to Systems Analysis and Design</td>
<td>see lecture notes on class web page</td>
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<tr>
<td>Week 2</td>
<td>Analyzing Business Processes and Cases</td>
<td>see lecture notes on class web page</td>
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<tr>
<td>Week 3</td>
<td>Requirements Modeling and Use Cases</td>
<td>see lecture notes on class web page</td>
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<td>Week 4</td>
<td>Data and Processing Modeling</td>
<td>see lecture notes on class web page</td>
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<td>Week 5</td>
<td>Object Modeling</td>
<td>see lecture notes on class web page</td>
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<td>Week 6</td>
<td>Development Strategies</td>
<td>see lecture notes on class web page</td>
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<td>Week 7</td>
<td>UML to Support Analysis</td>
<td>see lecture notes on class web page</td>
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<tr>
<td>Week 8</td>
<td>Midterm Exam</td>
<td>see lecture notes on class web page</td>
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<td>Week 9</td>
<td>Output and UIF Design</td>
<td>see lecture notes on class web page</td>
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<td>Week 10</td>
<td>Data Design</td>
<td>see lecture notes on class web page</td>
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<td>Week 11</td>
<td>System Architecture</td>
<td>see lecture notes on class web page</td>
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<tr>
<td>Week 12</td>
<td>UML to support Design</td>
<td>see lecture notes on class web page</td>
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### Week 13
**System Implementation**
see lecture notes on class web page

### Week 14
**Reliability, Security and Support**
see lecture notes on class web page

### Week 15
**Group Presentations**

### Week 16
**Final Exam**

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**Grading Policy**

The various components of your grade are weighted as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Exams (2) and Quizzes</td>
<td>30%</td>
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<tr>
<td>Group Projects and Peer Reviews</td>
<td>30%</td>
</tr>
<tr>
<td>Individual Assignments and Case Studies (drop 1)</td>
<td>40%</td>
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</tbody>
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**Course Policies:**

- ABSOLUTELY, NO LATE assignments will be graded that are more than two weeks late, unless specific arrangements are made with the instructor in advance. Assignments turned in during the first week after they are due will be penalized 25%. The second week after due date will incur a 50% penalty.
- All assignments will be turned in by midnight on the date due. Assignments may be submitted in person at class, at person in my office (not at the front desk!) or via email unless otherwise instructed.
- ALL requests for extensions on assignments must be made prior to the due date, in person, and must be for a valid “emergency” reason. In extreme circumstances, contact after the due date may be accepted if there is a COMPPELLING reason.
- Attendance is at your option. However, you are responsible for all discussion, lecture and other information disseminated during the lecture period, regardless of whether you attend or not.
- Lectures and Project assignments are included in this syllabus. However, you should regularly check the class website, as well as take note of in-class announcements for changes in the schedule or assignments.

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**Collaboration and Cheating:**

Collaboration among students in class is most certainly encouraged, as it is my belief that it provides a better learning environment, and is required for team assignments. All
resources used should be clearly cited in written work of any kind, both individual and team.

Note that each student should turn in his or her own work. Collaboration should only extend to discussing concepts and ideas, not in completing the actual details of the assignment. Work that is substantially similar without warrant will be subject to penalties at the discretion of the instructor.

For further details and clarifications regarding collaboration and cheating, view the university Student Rights and Responsibilities web page.

**Student Evaluation of Teaching Effectiveness (SETE)**

The Student Evaluation of Teaching Effectiveness (SETE) is a requirement for all organized classes at UNT. This short survey will be made available to you at the end of the semester, providing you a chance to comment on how this class is taught. I am very interested in the feedback I get from students, as I work to continually improve my teaching. I consider the SETE to be an important part of your participation in this class

**ADA:**

UNT complies with all federal and state laws and regulations regarding discrimination including the Americans with Disability Act of 1990 (ADA). If you have a disability and need a reasonable accommodation for equal access to education or services please contact the Office of Disability Accommodation.